



## WOMEN IN SUSTAINABLE DEVELOPMENT: SCIENCE AND QUALITY EDUCATION

### 3<sup>RD</sup> INTERNATIONAL CONFERENCE



## YAPON MADANIYATINI ILM-FAN ORQALI O'RGATISH VA TARQATISH: "GENJI MONOGATARI" MISOLIDA

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**Kalit soʻzlar:** "Genji Monogatari", qadimiy rasmlar, ayol, erkak, yapon madaniyati

**Аннотация:** Maqolada "Genji Monogatari" ("Shahzoda Genji haqidagi povest-roman") ni Yapon madaniyatining durdonasi sifatida tanishtiriladi. Yaponiyaning milliy boyligi boʻlgan "Shahzoda Genji haqidagi povest-roman" ning bir qismini koʻrsatib, ilm-fan orqali madaniyatning ommalashishi va oʻqitilishi haqida soʻz yuritiladi. Maqolaning xulosa qismida, ilm-fan qadimiy va oʻchib ketgan rasmlarni aslidek takrorlash foydali boʻlib, turli yangi jihatlarini kashf eta olish mumkinligi keltiriladi. Bundan tashqari, kursiv uslubdagi yapon yozuvini oʻqish qiyinligi, lekin ilim fanda sunʼiy intellekt yordamida bunday qadimiy yozuvlarni hech qanday kuch sarflamasdan oʻqish mumkinligiga urgʻu beriladi.

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## USING SCIENCE TO PROMOTE AND EDUCATE ON JAPANESE CULTURE INTRODUCING THE TALE OF GENJI AS AN EXAMPLE

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**Key word:** "Genji Monogatari", ancient paintings, woman, man, Japanese culture

**Abstract:** The article introduces "Genji Monogatari" ("The Narrative Novel of Prince Genji") as a masterpiece of Japanese culture. Showing a part of the national treasure of Japan, "The Narrative Novel of Prince Genji", it talks about the popularization and education of culture through science. In the concluding part of the article, it is stated that it is useful to reproduce ancient and faded pictures of science, and it is possible to discover various new aspects. In addition, it is emphasized that it is difficult to read cursive Japanese writing, but in science, with the help of artificial intelligence, such ancient writings can be read without any effort.

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## ОБУЧЕНИЕ И РАСПРОСТРАНЕНИЕ ЯПОНСКОЙ КУЛЬТУРЫ ЧЕРЕЗ НАУКУ: НА ПРИМЕРЕ «МОНОГАТЕРА ГЭНДЗИ»

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<b>Ключевые слова:</b> Гэндзи Моногатари», древние картины, женщина, мужчина, японская культура	<b>Аннотация</b> Статья представляет «Гэндзи Моногатари» («История принца Гэндзи») как шедевр японской культуры. Показывая часть национального достояния Японии «Повесть о принце Гэндзи», рассказывает о популяризации и воспитании культуры через науку. В заключении статьи полезно воспроизвести древние и современные картины науки, и можно обнаружить различные новые аспекты. Кроме того, подчеркивается, что японскую скоропись сложно читать, но в науке с помощью искусственного интеллекта такие древние письма можно читать без каких-либо усилий.
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くふきはら れい

ウズベキスタンは古くから西洋と東洋を結ぶ文化交流の地として栄えてきました。他方、日本はシルクロードを通じて、伝わってきた豊かな文物を活かして魅力的な文化を形成してきました。本日は日本文化を代表する『源氏物語』をご紹介します。この物語は女性によって1000年前に書かれた世界で初めての長編小説です。1000年もの間、読み続けられた女性作者による作品として、今回のテーマにたいへん相応しいと思います。現在では世界中で30以上の言語に翻訳されて親しまれています。

Uzbekistan has long flourished as a place of cultural exchange linking the West and the East. Japan, on the other hand, has formed a fascinating culture by taking advantage of the rich cultural properties brought to Japan by way of the Silk Road. Today, I would like to introduce "the Tale of Genji," as a representative of Japanese culture. This is the world's first long novel written a thousand years ago. It was written by a female author and has continued to be read and loved for as long as one thousand years. So, I think it is very appropriate for today's theme. It is now widely read in more than 30 languages all over the world.

今回は、この物語を絵画化した「国宝源氏物語絵巻」の一部をご紹介します。科学を活かした文化の普及や教育についてお話しします。

Today, I will show you part of the Picture Scroll of the Tale of Genji, a national treasure of Japan, and talk about the spread and education of culture by using science.

【①】ではまず、ふたつの絵をご覧ください。

左の絵は輪郭も色も、ぼやけていますね。右の絵はとてもきれいな色彩で描かれています。実は、これは左側の方が本物なのです。本物は1000年近く前に描かれたために、絵具が剥がれてしまったのです。そこで科学を活用して元の色と形を調べて復元模写したのが右の絵です。

First, please look at these two paintings.

The painting on the left is blurred in outline and color. The painting on the right has very beautiful colors. In fact, the left one is the original. It was painted nearly one thousand years ago, and the paint has peeled off over time. The picture on the right is a reproduction, created by using science to duplicate original colors and outlines.

【② ③】では、次の絵をご覧ください。これも色あせていますよね。そこで科学の力を用いて元の色を調べ、その通りに復元すると、次のような絵になります。女性たちの着物がとても華やかですね。男性の衣も、透かし模様がとても繊細に描かれていることがわかります。秋草が赤や黄色に紅葉しているのも、一枚ずつ異なる色で丁寧に描かれています。

Now, look at this picture. This one is also faded. By using science to reproduce the original colors, we can get this painting.  
(と言いながら、次のスライドを見せる) The women's kimonos look very gorgeous. You can see that see-through patterns on the men's robes are drawn in a very delicate manner. There are autumn plants with red and yellow leaves, and each leaf is carefully painted in different colors.

右上には白い月が輝いていますね。本物の絵は、銀を用いていたために、変色してしまって形がわからなくなってしまったのです。このように科学の力で本来の色や形がわかるようになりました。

In the upper right corner, you can see the brightly shining moon. Originally, the moon was painted with silver pigment, and over time, the color got lost and the shape of the moon became obscure. However, science has made it possible to duplicate the original color and shape.

【③ ⑤】では、次の絵をご覧ください。これも、かなり色落ちしています。復元した絵の方は、人物の衣や草花が繊細に美しく描かれていますが、人物は無表情で、悲しいのか嬉しいのか、よくわかりません。これとは対照的に庭の草花や簾は風に吹かれて動いているように描かれています。

Now, let's look at the next picture. This one is also quite faded in color. On the reproduction, the characters' robes and flowers and grasses are delicately and beautifully painted. However, the characters show no expression on their faces, and you could not tell whether they feel sad or happy. On the contrary, the flowers in the garden and the green reed screen look dynamic. You could imagine that they are swaying in the wind.

のような草花や簾には、人物の心情が描かれていると考えられます。では彼らの心はなぜ揺れ動いているのでしょうか。実は男性が新しい別の妻を迎えることになったので、妻は悲しみと不安で押しつぶされそうになっているのです。そこで彼は琵琶を弾いて慰めているのです。1000年前の日本では、男性は複数の妻を持つことが許されていましたが、女性にとっては、それは辛いことですよね。草花や簾が揺れ動いているのは、彼女の心の動揺をあらわしているのです。

It is considered that these plants and flowers and the reed screen represent the characters' states of mind. Then, why are their states of mind swaying or

restless in this scene? In fact, the woman is falling to pieces with sadness and anxiety because the man will take another wife soon. The man plays biwa to comfort her. One thousand years ago in Japan, men were allowed to have more than one wife, but for women, it is naturally heartbreaking experience. The swaying of the grasses and flowers and the reed screen represent the woman's disturbed state of mind.

【⑥⑦】 さて、この絵は最初にご紹介しましたね。その復元模写が次の絵になります。ここでの庭の草花は折れ曲がるように激しくたわんでいます。男性と女性は目頭を抑えています。彼女が臨終の時を迎えているので、お互いに永遠の別れを悲しんで泣いているのです。庭の草花が激しく乱れているのは、男女がどれほど辛く悲しい思いをしているか、ただ静かに涙に暮れているのではなく、心の中は激しく慟哭していることを示すのです。

Now, this picture is the one I showed you at the beginning. The next picture is its reproduction. The flowers and grasses in the garden are bowing in the hard wind. Both the man and the woman are drying their eyes with their sleeves. In this scene, the woman is at her death, and they are weeping over up-coming eternal farewell. The swaying flowers and grasses indicate how painful and sad the couple are feeling. It looks as if they are quietly in tears, but deep down within their hearts, they are wailing in sorrow.

このように人間の気持ちを自然の風物に託すという発想は、日本ではすでに1300年も前から和歌によって培われてきました。その発想が絵の描き方にも応用されたということがわかります。

The idea of projecting human feelings onto natural scenery has been cultivated in Japan for one thousand and three hundred years through waka poetry. You may agree that such an idea was applied to the way of drawing pictures for the Tale of Genji.

【VIII】最後に、この絵の場面を記した源氏物語の文章をご覧ください。右側の文章です。左は等間隔で丁寧に記されていますが、右は文字も間隔も乱れているのがわかりますね。死を前にして、動揺する心情が文字によって表現されているのです。

Finally, I will show you some text from the Tale of Genji, which describes the scene of that painting. Please look at the text on the right. As you see, the text on the left is carefully written with equal spacing, but on the right, both the letters and spacing look somewhat disordered. The letters on the right text express the characters' disturbance in the face of death.

### 【まとめ】

このように科学を駆使すると、原画を復元することができます。そうすると、いろいろな発見ができます。さらに今、見て戴いた日本の崩し字は、AI(人工知能)で読めるようになってきています。今後は、ウズベキスタンにたくさん保存されている貴重なコーランの文字などもAIで簡単に読めるようになるかも知れません。

In conclusion, science is useful for reproducing old and faded paintings as they used to be. As a result, you will find various aspects. For another example, Japanese handwriting in cursive style is hard to read, as you have seen here, but artificial intelligence, or AI, helps us read them without effort. In near future, AI may also make it easy to read the precious Koran scripts preserved in Uzbekistan.

女性作者による作品が1000年もの間、読み継がれているのは、それだけの魅力を湛えているからでしょう。これを今後、どのように女性・科学・教育に結びつけていくのか、またウズベキスタンや諸外国に普及していくのか、新たな課題です。

One of the reasons that the Tale of Genji, written by a female author, has continued to be read and loved for as long as one thousand years is because it is so fascinating. A new challenge for the future is how to connect this asset with



women, science, and education, and how to spread it in Uzbekistan and other countries.

これからも活発な交流を続けて、相互理解を深めていくことを心から願っています。

I sincerely hope that we will continue to keep active exchange and deepen mutual understanding.

ご清聴有り難うございました。

That's all for my presentation. Thank you very much for your attention.

*Xayrli kun. Yurtingizga tashrif buyurganimga ancha bo'ldi. Bugun meni bu yerga taklif qilganingizdan juda minnatdorman. "Genji Monogatari" ("Shahzoda Genji haqidagi povest-roman") ni misol qilgan holda yapon madaniyatini ommalashtirish va o'qitish" sarlavhasi ostida ma'ruza qilmoqchiman.*

O'zbekiston azaldan G'arb va Sharqni bog'laydigan madaniy almashinuv maskani sifatida gullab-yashnagan. Boshqa tomondan, Yaponiya Ipak yo'li orqali kirib kelgan boy madaniy xususiyatlardan foydalanib, ajoyib madaniyatni shakllantirdi. Bugun men "Genji Monogatari" ("Shahzoda Genji haqidagi povest-roman") ni Yapon madaniyatining durdonasi sifatida tanishtirmoqchiman. Bu asar ming yil avval yozilgan dunyodagi birinchi uzun roman hisoblanadi. Shunigdek, ushbu asar ayol yozuvchi tomonidan yozilgan va ming yillar davomida sevilib o'qishda davom etmoqda. Shu sababli, bugungi anjuman mavzusiga juda mos keladi deb o'ylayman. Hozirda bu asar butun dunyo bo'ylab 30 dan ortiq tillarda keng o'qib kelinadi.

Bugun men sizlarga Yaponiyaning milliy boyligi bo'lgan "Shahzoda Genji haqidagi povest-roman" ning bir qismini ko'rsatmoqchiman va ilm-fan orqali madaniyatning ommalashishi va o'qitilishi haqida so'zlab bermoqchiman.

Demak, iltimos, ushbu 2 rasimga e'tiboringizni qaratsangiz.

Chapdagi rasm konturlari va ranglari biroz xira. O'ngdagi rasm juda chiroyli ranglarga ega. Aslida, chap tomondagi rasm asl nusxadir. U qariyb ming yil oldin chizilgan va vaqt o'tishi bilan bo'yoq xiralashgan. O'ngdagi rasm asl ranglar

hisoblanadi. Darhaqiqat, chap tomoni asl nusxadir. U qariyb ming yil oldin bo‘yalgan va vaqt o‘tishi bilan bo‘yoq tozalangan. O‘ngdagi rasm ilm-fan yordamida asl ranglar va konturlari takrorlangan reproduksiyadir.

Endi bu rasmga e’tiboringizni qarating. Bu ham xira. Ilm-fan yordamida rasmning ranglarini tiklashimiz mumkin. Ayollar kimonolari juda ajoyib ko‘rinadi. Erkaklar choponidagi naqshlar juda nozik tarzda chizilganini ko‘rishingiz mumkin. Qizil va sariq barglari bo‘lgan kuzgi o‘simliklar mavjud va har bir barg sinchkovlik bilan turli xil ranglarda bo‘yalgan.

Yuqori o‘ng burchakda siz yorqin porlayotgan oyni ko‘rishingiz mumkin. Dastlab, oy kumush pigment bilan bo‘yalgan va vaqt o‘tishi bilan rang yo‘qolib, oyning shakli xiralashgan. Biroq, fan asl rang va shaklni takrorlash imkonini berdi.

Endi esa e’tiboringizni quyidagi rasmga qarating. Bu ham sarg‘ish tusda. Ilm-fan yutuqlaridan foydalanib asl ranglarni qayta tiklash orqali bu jilovlarga erishilgan. Ayollar kimonolari juda jozibador ko‘rinishga ega. Erkaklar mantiyasidagi naqshlarga juda nozik tarzda urg‘u berilganini ko‘rishingiz mumkin. Qizil va sariq barglari bo‘lgan kuzgi o‘simliklar mavjud, va ularning har bir bargi ehtiyotkorlik bilan turli xil ranglarga bo‘yalgan.

Yuqori o‘ng burchakda yorqin porlayotgan oyni ko‘rish mumkin. Dastlab, oy kumush pigment bilan bo‘yalgan va vaqt o‘tishi bilan rang yo‘qolib, oyning shakli xiralashgan. Biroq, fan asl rang va shaklni takrorlash imkonini berdi.

Bu o‘simliklar va gullar va qamish devor qahramonlarning ruhiy holatini ifodalaydi deb hisoblanadi. Unday bo‘lsa nega bu sahnada qahramonlarning ruhiy kechinmalari o‘zgaruvchan? Darhaqiqat, ayol qayg‘u va tashvish bilan parchalanadi, chunki erkak yaqinda boshqa xotin oladi. Erkak ayolni tinchlantirish uchun “biwa” chaladi. Ming yillar oldin Yaponiyada erkaklarga bir nechta xotinga ega bo‘lishga ruxsat berilgan, ammo ayollar uchun esa bu yurakni ezuvchi holat edi. O‘tlar va gullarning chayqalishi va qamish devor ayolning bezovtalangan ruhiy holatini ifodalaydi.

Hozirgi mana bu rasm esa boshida ko‘rsatgan rasmim. Keyingi rasm bu uning qayta tiklangan holati. Gullar va o‘tlar kuchli shamoldan egilayotgan



holdalar. Ayol ham erkak ham, har ikkalasi ko‘zlarini yenglari bilan artishyapti. Bu sahnada ayol o‘lim arafasida va ular yaqinlashib kelayotgan abadiy xayrlashuv sabab yig‘lamoqdalar. Tebranayotgan gullar va o‘tlar er-xotinning qanchalik og‘riqli va qayg‘uga cho‘kkanligini ko‘rsatadi. Ko‘rinishdan huddi, ular jimgina ko‘z yosh to‘kayotgandek, lekin qalbining tub-tubida g‘am-g‘ussa bilan yig‘layaptilar.

Inson his-tuyg‘ularini tabiiy manzaralarda aks ettirish g‘oyasi Yaponiyada bir ming uch yuz yil davomida “*waka*” she’riyati orqali rivojlantirilgan. Bunday g‘oya “Genji Monogatari” uchun rasm chizish usulida qo‘llanilganinig guvohi bo‘lishingiz mumkin.

So‘zim so‘nggida, men sizga o‘sha rasmning sahnasini tasvirlaydigan Genji haqidagi ertakdan bir nechta matnni ko‘rsatmoqchiman. Iltimos, o‘ng tomondagi matnga qarang. Ko‘rib turganingizdek, chap tarafdagi matn bir xil intervalda ehtiyotkorlik bilan yozilgan, ammo o‘ng tomonda harflar va intervallar biroz tartibsiz ko‘rinadi. O‘ngdagi matndagi harflar qahramonlarning o‘lim oldidagi bezovtaligini ifodalaydi.

Xulosa sifatida aytadigan bo‘lsak, ilm-fan qadimiy va o‘chgan rasmlarni avvalgidek takrorlash uchun foydalidir. Natijada siz turli yangi jihatlarini kashf eta olasiz. Yana bir misol, kursiv uslubdagi yapon yozuvini o‘qish qiyin, lekin sun‘iy intellekt ularni hech qanday kuch sarflamasdan o‘qishimizga yordam beradi. Yaqin kelajakda sun‘iy intellekt O‘zbekistonda saqlanib qolgan qimmatbaho Qur‘on yozuvlarini o‘qishni ham osonlashtirishi mumkin.

Ayol yozuvchi tomonidan yozilgan “Genji Monogatari” ning ming yillardan beri o‘qib kelinishi va sevilishda davom etishining sabablaridan biri uning juda maftunkorligidir. Kelajakdagi yangi vazifalarimizdan biri – bu boylikni ayollar, ilm-fan va ta‘lim bilan bog‘lash, uni O‘zbekiston va boshqa mamlakatlarda yoyishdir.

Mana shunday anjumanlar, hamkorligimizning davomiy bo‘lishini biz chin dildan istab qolamiz va umid qilamiz.

Shu bilan taqdimotimni yakunlayman. E’tiboringiz uchun katta rahmat!

